

99689-00019

Appln. No.:10/082,476
Amendment Dated July 18, 2005
Reply to Office Action of January 18, 2005

Remarks/Arguments:

Claims 13-14, 16-17 and 29-32 are pending. In addition, Applicants have added new claims 33-41. Regarding claim 13, Applicants have deleted the language limiting the target DNA to an antibiotic resistance gene or lacZ gene, and have added the limitation that the oligonucleotide is single stranded. Support for this amendment can be found on page 10, lines 28 to 30. New claim 33 is identical to claim 13 except that it sets forth that the oligonucleotide comprises a duplex DNA. Support for this amendment appears throughout the application, such as, for example, at page 10, lines 18 to 25.

Rejection under 35 USC § 103(a)

Claims 13-17 and 29-32 are rejected under 35 USC § 103(a) as being unpatentable over Yamashita et al. (EP 718,404) in view of Basczynski et al. (US 6,528,700). In view of the amendments to the claims and the arguments made below, Applicants respectfully traverse this rejection.

The Office argues that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use plant cell extract as taught by Basczynski et al. in the composition of Yamashita et al. Applicants respectfully submit that such a leap cannot be made with respect to the claims as now amended. Applicants note that Basczynski et al. specifically require the use of chimeric oligonucleotides. For example, Basczynski et al. state that, "[t]he compositions for use in the method are RNA-DNA hybrid oligonucleotides, referred to herein as chimeric oligonucleotides, that exploit the natural recombinogenicity of RNA-DNA hybrids." (US 6,528,700 Column 5, lines 4-8). Basczynski et al. go on to further state that the chimeric oligonucleotides comprise, on one strand, the modifying DNA flanked by two RNA sequences, with the opposite strand comprising DNA. (see US 6,528,700 Column 5, lines 13-28). As was well known in the art at the time of the invention, and as specifically referred to in Basczynski et al., the design of the chimeric oligonucleotide (or vector) is based on the discovery that RNA-DNA hybrids are highly active in homologous pairing reactions and protect the oligonucleotide/vector from nucleolytic degradation. (US 6,528,700 see column 5, lines 29-38).

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Applicants' amended claims and new claims specifically incorporate the use of either single-stranded oligonucleotides (claims 13, 14, 16, 17 and 29-32) or duplex DNA oligonucleotides (claims 33-41). Applicants do not claim the use of chimeric oligonucleotides. As such, the combination of Basczynski et al. with Yamashita et al. does not result in the invention as now claimed because at the time of the invention, those having skill in the art were using chimeric oligonucleotides to facilitate targeted gene correction in plants. Initially, Basczynski et al. specifically teach away from the use of single stranded oligonucleotides by stating that single stranded oligonucleotides are prone to degradation in the plant system (Column 5, lines 32-34). Further, there is nothing in Yamashita et al. to motivate or even suggest to one having skill in the art at the time of the invention that the incorporation of a single stranded oligonucleotide would overcome the degradation problems cited by Basczynski et al. Yamashita et al. do not in any way address the problems associated with plant systems at the time of the invention. The same argument applies to oligonucleotides comprising duplex DNA as again, there is nothing in Yamashita et al. suggesting or motivating the replacement of chimeric oligonucleotides with solely DNA duplex vectors in a plant system, and Basczynski et al. teach away from using solely DNA as they require the incorporation of some RNA to activate the vector recombination. (Column 5, lines 34-35).

In view of the above claim amendments and arguments, Applicants respectfully submit that the rejection of claims 13-17 and 29-32 under 35 USC § 103(a) as being unpatentable over Yamashita et al. (EP 718,404) in view of Basczynski et al. (US 6,528,700) no longer applies. Accordingly, Applicants respectfully request that this rejection be withdrawn.

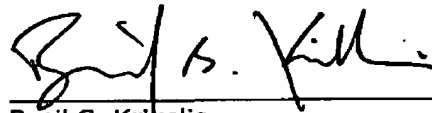
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Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is now in condition for allowance and favorable action is earnestly solicited. If it would expedite prosecution, the Examiner is invited to confer with the undersigned representative.

Respectfully submitted,



Basil S. Krkelis
Registration No. 41,129
Attorney for Applicant(s)

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BSK/rls

Attachments: Transmittal Form
Power of Attorney and Change of Correspondence Address
Statement Under 37 CFR 3.73(b)
3 Month Extension of Time

McCarter & English, LLP
Citizens Bank Center
919 N. Market Street, Suite 1800
P.O. Box 111
Wilmington, DE 19899